

# V-Panel™ 24" HD Touch Screen Displays

- > High-Definition 24" widescreen touch display
- > 1920 x 1200 WUXGA display resolution
- > High-performance S-PVA display technology
- > Rich, accurate color reproduction
- > High 6ms speed response
- > High contrast ratio, high aperture, high color gamut
- > Ultra-wide 178 degree viewing angles
- > Fully HDCP compliant
- > Digital Graphics Engine (DGE-2) installs up to 330 ft away<sup>[1,2]</sup>
- > Also works with DVPHD and DVPHD-GB Digital Video Processors<sup>[1,2,4]</sup>
- > Single wire DigitalMedia 8G+™ connectivity
- > Compatible with DigitalMedia™ switchers and transmitters
- > Built-in HD scaler enables full-screen video without a DGE
- > USB keyboard/mouse port
- > VESA 100x200 mounting option
- > Stylish flush wall and lectern mount options
- > Available in white or black

The V-Panel V24R-C merges high-definition Crestron® touch screen control and HD video in one stylish and versatile 24" touch screen display. Its generous WUXGA screen delivers stunning video performance even at extreme viewing angles, providing an exceptional HDTV or computer display solution with integrated touch screen functionality.

The V24R-C suits a broad range of residential and commercial applications, excelling as a home controller and television display for a luxury kitchen or bedroom, as a presentation control panel for a university lecture hall, or as a video control surface for corporate and government command centers. The choice of flush in-wall, lectern, or VESA mounting affords a clean, modern appearance for any custom installation.

The V24R-C replaces separate touch screens, TV displays, and computer monitors with one gorgeous device. Whether mounted flush in a wall or on a wall bracket, desk stand, or articulating arm, its streamlined design allows it to be installed virtually anywhere. Complete connectivity is provided through a simple one-wire interface that allows for long wire runs while affording a clean appearance. Together with a DGE-2 Digital Graphics Engine<sup>[1]</sup>, the V24R-C delivers a powerful and elegant touch screen control solution featuring advanced Smart Graphics™, dual-window HD video, high-performance H.264 streaming video, onboard multimedia and Web browsing, and built-in annotation.

## Beyond High-Definition Video

With a display resolution of 1920 x 1200, the V24R-C provides substantial real estate for all kinds of custom controls and icons with true feedback and real-time status display, full-motion video windows, and advanced navigation of digital media servers, tuners, and other devices. The 16:10 aspect ratio allows a full HD 1080p video image to appear full size along with a custom control bar, providing immediate access to AV and lighting controls, clock and weather widgets, scrolling text and other objects while simultaneously watching TV or viewing a video camera.



The V24R-C employs high-performance S-PVA display technology to deliver an optimum HD experience with rich, accurate color reproduction, high speed response, and excellent black depth and contrast. Ultra-wide 178 degree horizontal and vertical viewing angles ensure consistent picture quality on and off axis, alleviating the need to be directly in front of the screen when reaching for an on-screen control or just catching the morning news.

## Digital Graphics Engine

For a typical control application using the V24R-C, a DGE-2 Digital Graphics Engine is also required.<sup>[1]</sup> The DGE-2 can be installed at the central equipment location, dramatically reducing all the wiring from head end AV sources, switchers, and the control network. A single CAT5e or DigitalMedia 8G™ Cable connects the V24R-C to the DGE-2 over a wiring distance of up to 330 feet (100 m), affording exceptional flexibility while minimizing wiring cost and complexity.<sup>[2]</sup>

## Smart Graphics™

Crestron touch screens use Smart Graphics to deliver the ultimate user experience and the ultimate value by enabling the creation of dynamically rich user interfaces with incredible efficiency and unparalleled functionality. Using Smart Graphics, programmers can swiftly integrate fluid gesture-driven controls, animated feedback, metadata, embedded apps, and full-motion video for a deeply engaging and ultra-intuitive touch screen experience.

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Crestren Smart Graphics include the following enhancements:

- Cool-looking graphical buttons, sliders, knobs, and gauges are intuitive and fun to use.
- Kinetic effects enhance the feeling of realism with lists and toolbars that scroll with momentum at the flick of a fingertip.
- Drag-and-drop objects snap into place offering an easy way to switch sources.
- Dashboard widgets personalize the touch screen with clocks, weather, news, and other information.
- Customizable themes allow a completely different look and feel for every user, event, or season.
- Fully-developed SmartObjects™ enable sophisticated control over complex devices with minimal programming.

## Embedded PC Applications

In combination with a DGE-2 graphics engine, the V24R-C provides everything you need to enjoy online music and videos, browse the Internet, and even review digital documents without a separate computer. With Microsoft® Internet Explorer® embedded, you have full access to the entire World Wide Web including sites that use Flash® or Java®. Windows Media® Player ensures broad compatibility for playing most types of digital media. Adobe® Acrobat® Reader and Microsoft PowerPoint®, Word, and Excel® document viewers complete the online experience, allowing you to download and view documents and presentations.

In addition, VNC Viewer support delivers enhanced cross-platform interaction with computers over the network or Internet, allowing remote access and control of desktop applications to unleash a host of possibilities for system integration and multimedia presentation.

## HD Streaming Video

High-definition streaming video capability makes it possible to view security cameras and other video sources over the network right on the touch screen. Native support for H.264 and MJPEG formats allows the V24R-C and DGE-2<sup>[1]</sup> to display live video images from IP cameras and servers such as the Crestren CEN-NVS200 Network Video Streamer<sup>[1]</sup>. And, through the embedded Web browser and media player, they support a wide variety of other streaming and downloadable video formats, enabling access to all kinds of content from media servers and Web sites like YouTube® and Netflix®<sup>[3]</sup>.

## HDMI® and Analog Video

In addition to handling streaming video, the V24R-C can simultaneously display up to two fully-scalable, full-motion video windows, each supporting HD or SD video and high-resolution computer signals from external sources. All connections are made at the DGE-2 using conventional HDMI, VGA, and BNC type cables.

## HDCP Support

Industry-leading support for HDCP (High-bandwidth Digital Content Protection) ensures seamless compatibility with content-protected DVD, Blu-ray Disc®, digital HDTV, and multimedia computer sources.

## Keyboard/Mouse Options

On-screen keyboard and mouse capabilities enable complete control of the embedded Web browser and other applications, and can also be used to control computers running TouchPoint® Virtual Mouse & Keyboard Software (VMK-WIN). A USB port is also provided on the V24R-C, allowing for the connection of a physical keyboard and mouse.

## Real-Time Annotation

Whether conducting a high-level boardroom meeting, training seminar, or watching sports in your home theater, annotation helps put the fine point on any presentation. Built-in annotation provides the ability to illustrate your thoughts on-the-fly, letting you draw and write over high-definition video and computer images, and sketch out ideas on a whiteboard screen, without leaving the podium or your favorite chair while other viewers watch on the big screen.

## Remote Annotation

Remote annotation capability allows multiple touch screen users to draw with their fingertips over the same video image or whiteboard screen, enabling enhanced interaction between several participants in a courtroom, classroom, or council chamber.

## Presentation Output

Through an HDMI or DigitalMedia™ connection at the DGE-2, the V24R-C screen image can be sent to additional display devices, allowing videos, PowerPoint presentations, annotation, and other on-screen media to be shared with a live audience. Audio can also be enabled using powered speakers or a larger audio system connected to the DGE-2's HDMI, DigitalMedia, or analog audio outputs.

## DigitalMedia™

DigitalMedia (DM®) connectivity opens up new ways to configure a touch screen control system. For instance, using a DM switcher such as the DM-MD8X8<sup>[1]</sup>, multiple V24R-C touch screens can be connected to a single DGE-2, providing a simple, cost-effective way for multiple participants to view and control the same graphical interface. DigitalMedia also provides a versatile means for distributing touch screen content to additional display devices and sound systems to serve a larger audience.

The V24R-C features a DM 8G+™ type input, supporting the connection to a DGE-2 Digital Graphics Engine via a DM 8G+ transmitter (DM-TX-201-C or equivalent<sup>[1]</sup>). It can also connect directly to any DM switcher equipped with a DM 8G+ output. A single CAT5e or DigitalMedia 8G cable carries all video, audio, Ethernet, USB, and control signals up to 330 ft (100 m).<sup>[2]</sup>

## DVPHD Integration

In addition to the DGE-2, V-Panel is also compatible with the award-winning DVPHD High-Definition Digital Video Processor<sup>[1]</sup>, enabling the display of up to 8 simultaneous video windows along with HD touch screen graphics and annotation. The DVPHD supports high-definition video and computer signals from a wide variety of digital and analog sources. Its DVI output connects to the V24R-C via a DM 8G+ transmitter or DigitalMedia switcher.<sup>[2,4]</sup>

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## SPECIFICATIONS

### Touch Screen Display

**Display Type:** TFT active matrix color LCD

**Size:** 24 inch (610 mm) diagonal

**Aspect Ratio:** 16:10 WUXGA

**Resolution:** 1920 x 1200 pixels

**Brightness:** 300 nits (cd/m<sup>2</sup>)

**Contrast:** 1000:1

**Response Time:** 6 ms G-to-G

**Color Depth:** 24-bit, 16.7M colors

**Illumination:** Backlit fluorescent

**Viewing Angle:** ±89° horizontal, ±89° vertical

**Touch Screen:** Resistive

### Buttons & Indicators

**Hard Key:** (1) Programmable pushbutton, illuminates green to indicate power is on, reboots the DGE if held for 5 seconds

**DM 8G IN (Rear):** (2) LEDs, green LED indicates DM link status, amber LED indicates DM signal stream and HDCP status

### Communications

**DigitalMedia™:** DM 8G+, HDCP, EDID, 100 Mbps Ethernet

**USB:** USB host, supports USB HID class devices

### Video

**Input Signal Type:** DM 8G+

**Input Resolution:** 1920x1200@60Hz native, or any other progressive resolution up to 1920x1200@60Hz

Refer to DGE-2 or DVPHD specifications for additional information.

### Connectors

**24VDC 3.7A (V24R-C and V24RL-C models):** (1) 2-pin 5mm detachable terminal block, 24 Volt DC power input;

Connects to V24-IMCW-C interface module via V-CBL-SC cable<sup>[5]</sup>;

PW-2435RU power pack included

**24VDC 3.7A (V24R-WALL-C model):** (1) 2-pin 5mm detachable terminal block, 24 Volt DC power input;  
PW-2435DUL power pack included

**DM 8G IN (V24R-C and V24RL-C models):** (1) 8-pin RJ45 female, shielded, DM 8G+ input;

Connects to V24-IMCW-C interface module via V-CBL-SC cable<sup>[5]</sup>

**DM 8G IN (V24R-WALL-C model):** (1) 8-pin RJ45 female, shielded, DM 8G+ input;

Connects to DM 8G+ output of a DM transmitter or switcher via CAT5e or Crestron DM-CBL-8G cable<sup>[2]</sup>

**USB HID:** (1) USB Type A female;

USB host port for connection of a mouse/keyboard or other USB HID-compliant device

### Power Requirements

**Power Pack:** 3.7 Amps @ 24 Volts DC;

100-240 Volt AC, 50/60Hz power pack included;

V24R-C and V24RL-C models include PW-2435RU power pack, which connects to the V24-IMCW-C interface module<sup>[5]</sup>;

V24R-WALL-C model includes PW-2435DUL power pack, which connects directly to the touch screen

### Environmental

**Temperature:** 41° to 113°F (5° to 45°C)

**Humidity:** 10% to 90% RH (non-condensing)

**Heat Dissipation:** 291 BTU/Hr

### Enclosure

**V24R-C:** Plastic case, VESA 100x200 mm mountable

**V24R-WALL-C:** Includes metal rear enclosure with plastic front bezel, additional mounting accessory required<sup>[1,6]</sup>

**V24RL-C:** Includes metal rear enclosure with plastic front bezel, fan-cooled, additional mounting accessory recommended<sup>[1,6]</sup>

### Dimensions

**V24R-C:** Height: 15.52 in (395 mm);

Width: 23.09 in (587 mm);

Depth: 2.81 in (72 mm)

**V24R-WALL-C:** Height: 16.79 in (427 mm);

Width: 24.44 in (621 mm);

Depth: 3.43 in (87 mm)

**V24RL-C:** Height: 16.79 in (427 mm);

Width: 24.44 in (621 mm);

Depth: 3.43 in (87 mm)

### Weight

**V24R-C:** 21.5 lb (9.76 kg)

**V24R-WALL-C:** 24.0 lb (10.89 kg)

**V24RL-C:** 24.6 lb (11.16 kg)

# V24R-C V-Panel™ 24" HD Touch Screen Displays

## MODELS & ACCESSORIES

### Available Models

**V24R-C-B:** V-Panel™ 24" VESA Mount HD Touch Screen Display, DM 8G+, Black

**V24R-C-W:** V-Panel™ 24" VESA Mount HD Touch Screen Display, DM 8G+, White

**V24R-WALL-C-B:** V-Panel™ 24" Wall Mount HD Touch Screen Display, DM 8G+, Black

**V24R-WALL-C-W:** V-Panel™ 24" Wall Mount HD Touch Screen Display, DM 8G+, White

**V24RL-C-B:** V-Panel™ 24" Lectern Mount HD Touch Screen Display, DM 8G+, Black

**V24RL-C-W:** V-Panel™ 24" Lectern Mount HD Touch Screen Display, DM 8G+, White

### Included Accessories

**PW-2435RU:** Regulated Universal Power Pack for V24R-C & V24RL-C (Qty. 1 included with V24R-C-B, V24R-C-W, V24RL-C-B & V24RL-C-W)

**PW-2435DUL:** Regulated Universal Power Pack for V24R-WALL-C (Qty. 1 included with V24R-WALL-C-B & V24R-WALL-C-W)

**V24-IMCW-C:** Interface Module for V24R-C & V24RL-C (Qty. 1 included with V24R-C-B, V24R-C-W, V24RL-C-B, & V24RL-C-W)

**V-CBL-S6C-B:** V-Cable Siamese Cable, DM 8G+, 6 ft, Black (Qty. 1 included with V24R-C-B & V24RL-C-B)

**V-CBL-S6C-W:** V-Cable Siamese Cable, DM 8G+, 6 ft, White (Qty. 1 included with V24R-C-W & V24RL-C-W)

### Available Accessories

**DGE-2:** Digital Graphics Engine w/HDMI® and DigitalMedia™ CAT Connectivity

**DM-TX-201-C:** DigitalMedia 8G+™ Transmitter 201

**V24-IMCW-C:** Interface Module for V24R-C & V24RL-C

**V-CBL-SC Series:** V-Cable Siamese Cables, DM 8G+

**DM-CBL-8G-NP:** DigitalMedia 8G™ Cable, non-plenum

**DM-CBL-8G-P:** DigitalMedia 8G™ Cable, plenum

**DM-8G-CONN-100:** DigitalMedia 8G™ Cable Connector, 100-Pack

**DM-8G-CRIMP:** Crimping Tool for DM-8G-CONN

**BB-V24:** Back Box for V24R-WALL-C

**BBI-V24:** Back Box for V24R-WALL-C - International Version

**PMK-V24:** Pre-Construction Mounting Kit for V24R-WALL-C and V24RL-C

### Notes:

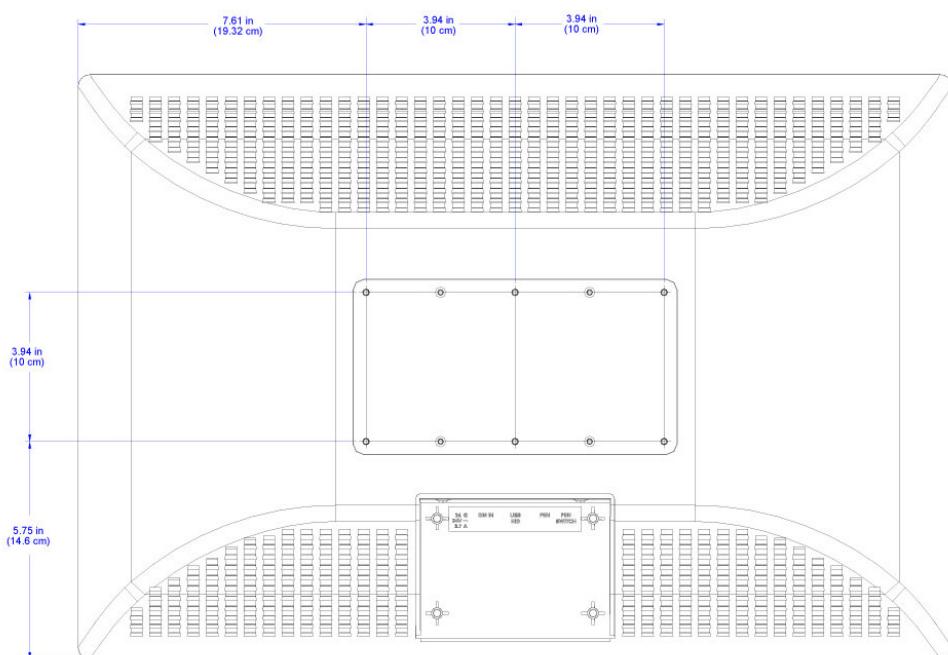
1. Item(s) sold separately.
2. The V24R-C features a DM 8G+ type input. Connection to a DGE-2 or DVPHD requires a DM 8G+ transmitter or DM switcher. For wiring up to 330 ft (100 m) in length, use Crestron DM-CBL-8G DigitalMedia 8G Cable or third-party CAT5e (or better) UTP or STP. Shielded cable and connectors are recommended to safeguard against unpredictable environmental electrical noise which may impact performance. Refer to the [Crestron DigitalMedia Design Guide, Doc. #4546](#) for DM system design guidelines. The V24R-C and V24RL-C models each include (1) V-CBL-S6C 6 ft V-Cable and (1) V24-IMCW-C interface module. The V24R-WALL-C model includes no cable or interface module. For complete information, please refer to the spec sheet for each individual product, or contact your Crestron representative.
3. Accessing Netflix content requires an active Netflix account. See [www.netflix.com](http://www.netflix.com) for details.
4. An Ethernet-enabled control system and DM 8G+ interface are required for use with a DVPHD. Be advised, DVPHD does not support streaming media, Web browsing or other embedded PC functionality.
5. Items included. Refer to the spec sheet for each item for additional information.
6. V24R-WALL-C model must be installed in an upright position with the screen perpendicular to the floor. V24RL-C model may be mounted in an angled lectern or table top. Allow adequate space at the top and bottom of the rear housing for proper ventilation.

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at [www.crestron.com/salesreps](http://www.crestron.com/salesreps) or by calling 800-237-2041.

The specific patents that cover Crestron products are listed online at: [patents.crestron.com](http://patents.crestron.com).

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Cover removed to show connector placement

